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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Marvin M. Johnson

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23505

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06/25/2009

CONLEY ROSE, P.C.

David A. Rose

P. O. BOX 3267

HOUSTON, TX 77253-3267

EXAMINER

NGUYEN, CAM N

ART UNIT

PAPER NUMBER

1793

NOTIFICATION DATE

DELIVERY MODE

06/25/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pathou@conleyrose.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/727,919	<b>Applicant(s)</b> JOHNSON ET AL.	
	<b>Examiner</b> Cam N. Nguyen	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04/15/09 (an RCE/amendment/response).
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,8-16,18-77 and 112-119 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,8-16,18-77 and 112-119 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **Status of Continued Examination Application (RCE)**

1. A request for continued examination (RCE) under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after the final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on 04/15/09 has been entered.

### **Response to Amendment**

2. The amendment filed on 02/18/09 has been made of record and entered. Claims 1, 14, 37, 51, & 66 have been amended. Claims 5, 7, 17, & 78-111 have been canceled.

Claims 1-4, 6, 8-16, 18-77, & 112-119 are currently pending in this application.

### **Specification**

3. The examiner has not checked the specification to the extent necessary to determine the presence of **all** possible minor errors (grammatical, typographical, and idiomatic). Cooperation of the applicant(s) is requested in correcting any errors of which applicant(s) may become aware of in the specification, in the claims and in any further amendment(s) that applicant(s) may file.

Applicant(s) is also requested to complete the status of the copending applications referred to in the specification by their Attorney Docket Number or Application Serial Number, **if any**.

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The status of the parent application(s) and/or any other application(s) cross-referenced to this application, **if any**, should be updated in a timely manner.

### **Claim Objections**

4. **Claims 22 & 40** are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 14 & 37. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The same metal concentration range is set forth in these claims as in the independent claims 14 & 37.

Claims 23-36 & 41 are depending upon claims 22 & 40. If these claims are canceled, the dependency must also be changed.

### **Double Patenting**

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting

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ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**Claims 1-4, 6, 8-16, 18-77, & 112-119** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims **11-46** of **copending Application No. 12/114,088**. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons.

The difference between instant claims and the claims of the copending application '088, is that the claims of the copending application '088 is narrower in scope with respect to the concentration of the second metal. Claims 11, 17, & 28 of the copending application '088 recites the catalyst contains "from about 0.01 weight percent to about 10 weight percent of the second metal"; whereas, the instant claims 1, 14, 37, 51, 66 do not recite any amount. The instant claim 112 however recites the second metal content in the range of 0.05-1.2% by weight, which is falling within the range disclosed in the copending application '088.

Thus, it is considered the instant claimed catalyst is the same or closely related to the catalyst as recited in the copending application '088 and that it is inherent that one of ordinary skill in the art at the time the invention was made would have been utilized the second metal concentration at the amounts as recited in the copending application '088, because it is a workable range or a result effective parameter. Further, the same amounts of the second metal are used and being recited in the depending claims 25-29 of the instant application, which provides the evidence.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Claim Rejections - 35 USC § 102(b)**

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

A. **Claims 1-4, 10-16, 18-20, 22-30, 32-33, 35, 37-40, 46, 49, 51-57, 61-69, & 72-77**

are rejected under 35 U.S.C. 102(b) as being anticipated by Sarrazin et al., hereinafter referred to as "*Sarrazin '851*", (US Pat. 5,356,851).

*Sarrazin '851* discloses a selective hydrogenation catalyst containing at least one group VIII metal and at least one Group IIIA metal selected from the group consisting of gallium and indium, said metals being deposited on a catalyst support (see col.7, claim 1). The group VIII metal is palladium, platinum, or nickel (see col. 8, claim 4). The support is silica, alumina, silica-alumina, charcoal or an aluminate (see col. 8, claim 5). The Group VIII metal concentration is 0.2 to 5% by weight (see col. 8, claim 14). The Group IIIA metal concentration is 0.1 to 5% by weight (see col. 8, claim 7). The molar ratio of the metallic element of Group IIIA to the metal of Group VIII is 0.2 to 5 (see col. 8, claim 8). See also Examples in the reference, which shows catalysts contain palladium and gallium on alumina support.

The disclosed Group VIII metal and Group IIIA metal concentrations, and their metal ratios are falling within the claimed ranges, which meet the claimed limitations.

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The limitation on “wherein the catalyst is capable of selectively hydrogenating acetylene with a conversion Sc of at least about 95% and a selectivity to ethylene relative to ethane Ss of at least about 25 when the catalyst is employed in a steady-state liquid phase hydrogenation process” in the independent claims and also in the dependent claims are noted. It is considered the catalyst disclosed by *Sarrazin '851* would inherently be capable of performing the same because both the disclosed catalyst and the claimed catalyst contain the same metal components, same metal concentrations, and having the same composition.

There is no patentable distinction seen between the claimed catalyst and that disclosed by the reference, thus anticipates the instant claims.

B. **Claims 1-4, 6, 12-13, 14-16, 18-20, 22-30, 32-33, 36, 37-44, 47, 50-57, & 61-70**

are rejected under 35 U.S.C. 102(b) as being anticipated by “*Thomson '896*”, (US Pat. 5,817,896).

*Thomson '896* discloses a catalyst comprising a catalytic metal being palladium, rhodium, ruthenium, silver, gold or gallium, and a material having greater affinity for halogen than does the catalytic metal, wherein said material contains zinc, aluminum, etc. (see col. 6, claim 15). The catalyst is supported on an inert carrier, and alumina is being disclosed (see col. 6, claims 18-20). Combination of palladium and zinc is being preferred (see col. 1, ln 64-65). *Thomson '896* further discloses that it is preferable that the molar ratio of catalyst metal to material is from 1:10 to 1:1, such as from 1:5 to 1:2 (see col. 1, ln 65-67). See also entire reference for further details.

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The disclosed Group VIII metal and Group IIIA metal concentrations, and their metal ratios are falling within the claimed ranges, which meet the claimed limitations.

The limitation on “wherein the catalyst is capable of selectively hydrogenating acetylene with a conversion Sc of at least about 95% and a selectivity to ethylene relative to ethane Ss of at least about 25 when the catalyst is employed in a steady-state liquid phase hydrogenation process” in the independent claims and also in the dependent claims are noted. It is considered the catalyst disclosed by *Thomson '896* would inherently be capable of performing the same because both the disclosed catalyst and the claimed catalyst contain the same metal components, same metal concentrations, and having the same composition.

There is no patentable distinction seen between the claimed catalyst and that disclosed by the reference, thus anticipates the instant claims.

**Claim Rejections - 35 USC § 102(b)/103**

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



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A. **Claims 58-60, 112-115, & 117-119** are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sarrazin et al., hereinafter referred to as "*Sarrazin '851*", (US Pat. 5,356,851).

Product-by-process limitations in these claims have been noted. While they are not disregarded, they have no bearing on the patentability of the claimed catalyst because the instant claims are called for "a catalyst", which is a product and not a process of making the catalyst. It is well settled that the patentability of the product and its method of production are separately determined. The catalyst disclosed is seen the same as the claimed catalyst, which anticipates the instant claims. See *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985); *In re Brown*, 173 USPQ 688, 688 (CCPA 1977); *In re Fessman*, 180 USPQ 324, 326 (CCPA 1977). See also *MPEP* 2113.

B. **Claims 112-119** are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over "*Thomson '896*", (US Pat. 5,817,896).

Product-by-process limitations in these claims have been noted. While they are not disregarded, they have no bearing on the patentability of the claimed catalyst because the instant claims are called for "a catalyst", which is a product and not a process of making the catalyst. It is well settled that the patentability of the product and its method of production are separately determined. The catalyst disclosed is seen the same as the claimed catalyst, which anticipates the instant claims. See *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985); *In re Brown*, 173 USPQ 688, 688 (CCPA 1977); *In re Fessman*, 180 USPQ 324, 326 (CCPA 1977). See also *MPEP* 2113.

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**Claim Rejections - 35 USC § 103**

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 8-9, 21, 31, 34, 45, 48, & 71** are rejected under 35 U.S.C. 103(a) as being unpatentable over "***Sarrazin '851***" or "***Thomson '896***", as applied to claims (see paragraphs 6A and 6B) above, and further in view of Dai et al., hereinafter referred to as "***Dai '127***", (US Pat. 6,822,127 B2).

***Sarrazin '851*** and "***Thomson '896*** disclose catalysts as set forth in paragraphs 6A and 6B, except for the second metal component being Group VIIB (or Mn) as recited in the above listed claims.

However, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have incorporated these known "Mn" metal component into the catalyst of the above references in order to achieve a selective hydrogenation catalyst having an enhanced or increased in catalytic activities because it is known as useful catalytic metal, as evidenced by ***Dai '127*** (see ***Dai '127*** at col. 14, claim 1).

**Response to Applicants' Arguments**

9. The remarks filed on 02/18/09 have been fully reconsidered, but not deemed persuasive in view of the new ground of rejection(s) and/or objection(s) above.

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The rejection made over Johnson '124 and Ryu '588 references have been removed from the office action.

**Citations**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. All references are cited for related art. See PTO-892 Form prepared.

**Conclusion**

11. Claims 1-4, 6, 8-16, 18-77, & 112-119 are pending. Claims 1-4, 6, 8-16, 18-77, & 112-119 are rejected. No claims are allowed.

**Contacts**

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner CAM N. NGUYEN, whose telephone number is 571-272-1357. The examiner can normally be reached on M-F, 9:00 AM - 6:30 PM, at alternative work site.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Cam N. Nguyen/

Primary Examiner

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/C. N. N./

June 19, 2009